

**ABSTRACT**

The present invention relates to a rigid material based on PPO and an aromatic vinyl resin with improved impact strength comprising:

- 5 • 99 to 20% of a resin (A) consisting of a mixture of PPO and of an aromatic vinyl resin,
- 1 to 80% of an impact modifier comprising at least one block copolymer S-B-M in which:
  - 10 ➤ each block is linked to the other by means of a covalent bond or an intermediate molecule linked to one of the blocks by a covalent bond and to the other block by another covalent bond,
  - M consists of MMA monomers optionally copolymerized with other monomers and comprises at least 50% by weight of methyl methacrylate (MMA),
  - 15 ➤ B is incompatible with the resin (A) and with the M block and its glass transition temperature  $T_g$  is less than the temperature for using the rigid material,
  - S is incompatible with the B block and the M block and its  $T_g$  or its melting point m.p. is greater than the  $T_g$  of B,
  - 20 ➤ S is compatible with the resin (A).

The aromatic vinyl resin is advantageously polystyrene and the triblock S-B-M consists of polystyrene, polybutadiene and PMMA respectively.